



Electricity Bill Calculator Updates

Brian Mirletz
2021 SAM Webinars
September 29, 2021

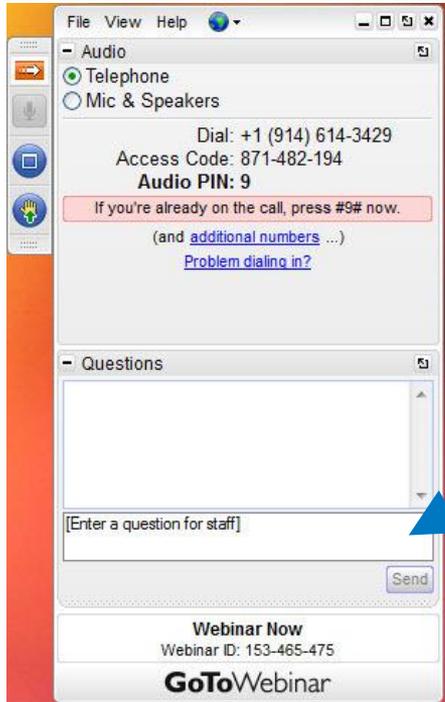
SAM Webinars for 2021

Merchant Plant Financial Model	August 4
Marine Energy Performance Models	August 18
New Battery Model Features	September 1
New Community Solar Financial Model	September 15
Electricity Bill Calculator Updates	September 29

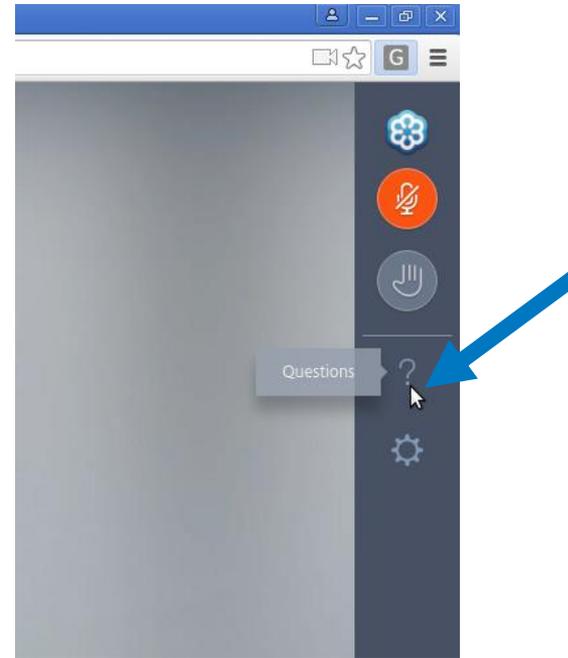
Register for free at: <https://sam.nrel.gov/events.html>

Find webinar recordings at <https://sam.nrel.gov/>

Questions and Answers



Desktop application



Instant Join Viewer

We will either type an answer to your question or answer it at the end of the presentation.

What is SAM?

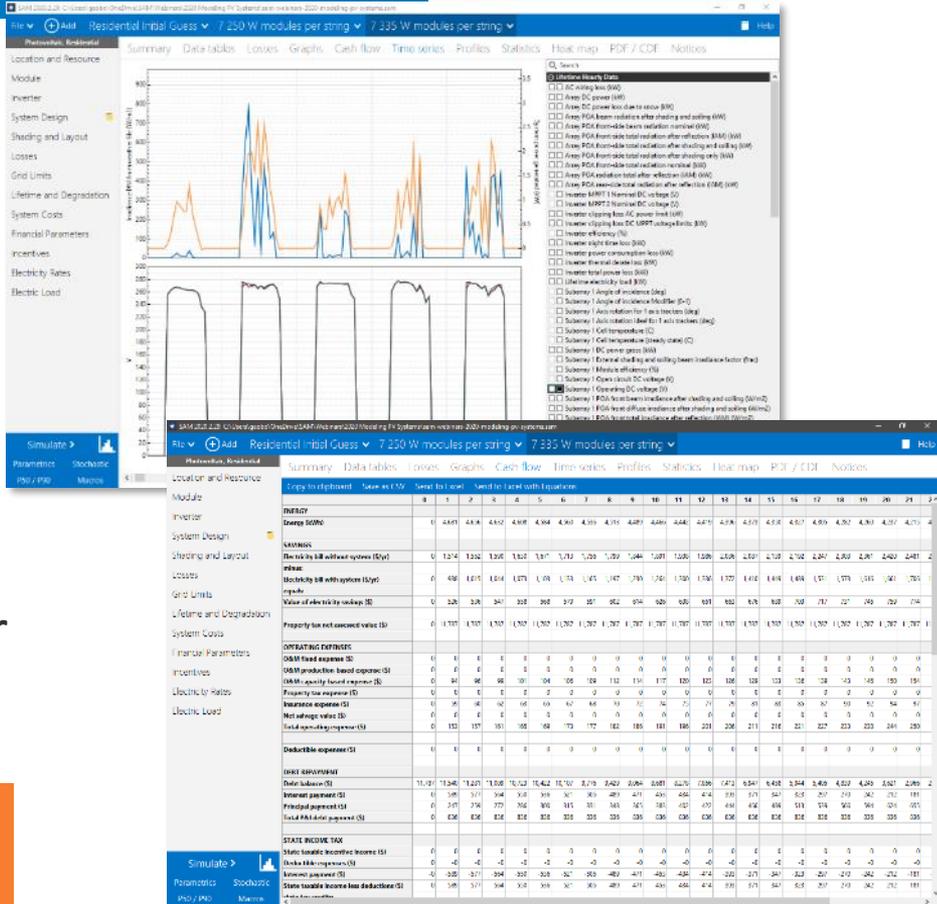
The System Advisor Model

Free computer software developed and distributed by the U.S. Department of Energy's National Renewable Energy Laboratory

Calculates:

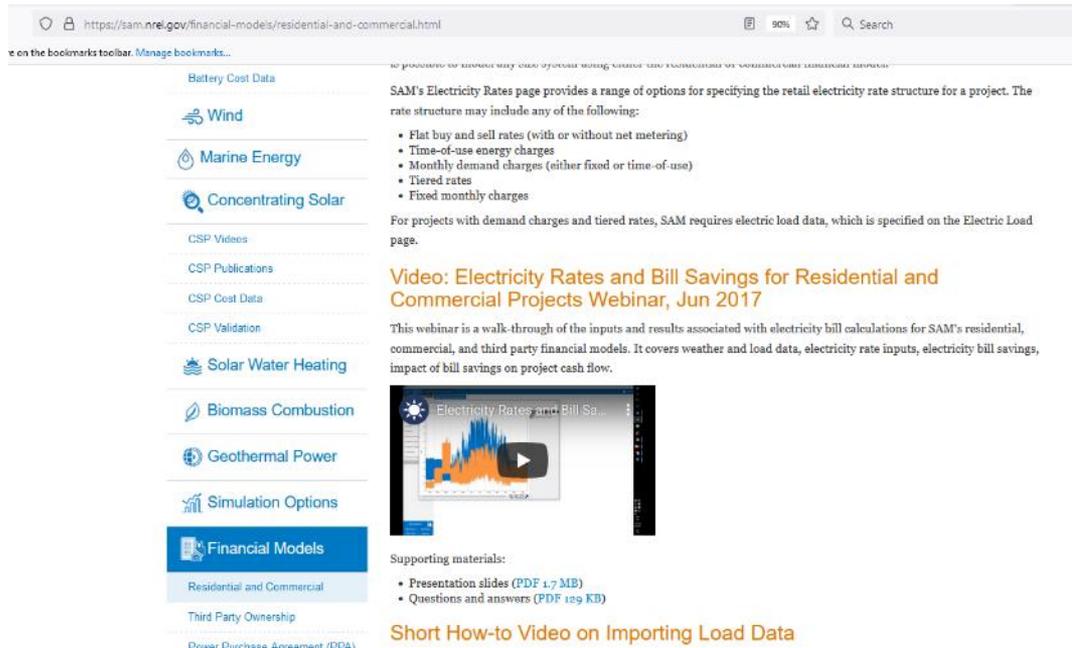
- A power system's energy output
- A power project's cash flow over years of operation

"Introduction to SAM 2020.2.29"
<https://sam.nrel.gov>



Previous Webinar

- Residential and commercial financial models: <https://sam.nrel.gov/financial-models/residential-and-commercial.html>



The screenshot shows the SAM website's "Financial Models" page. The left sidebar lists various energy technologies, with "Financial Models" highlighted in blue. Under "Financial Models", "Residential and Commercial" is selected. The main content area features a heading "SAM's Electricity Rates page provides a range of options for specifying the retail electricity rate structure for a project." followed by a list of rate options: Flat buy and sell rates, Time-of-use energy charges, Monthly demand charges, Tiered rates, and Fixed monthly charges. Below this, a video player is embedded with the title "Video: Electricity Rates and Bill Savings for Residential and Commercial Projects Webinar, Jun 2017". Underneath the video, there are links for "Supporting materials:" including "Presentation slides (PDF 1.7 MB)" and "Questions and answers (PDF 109 KB)". At the bottom of the page, a link for "Short How-to Video on Importing Load Data" is visible.

Outline

- 1 Summary of Residential and Commercial Financial Model**

- 2 Open EI Utility Rate Database**

- 3 Energy Charges**

- 4 Metering and Billing Options**

- 5 Demand Charges**

- 6 Billing Demand for kWh/kW Energy Charges**

- 7 Questions and Answers**

Distributed Generation Options

Name	Accounting	Compensation timing	Outputs
Net energy metering	kWh, monthly	Annual True-Up (single credit)	Cumulative credit for true-up (kWh) Annual true-up payments
Net energy metering w/ \$ credits	kWh, monthly	Monthly	Net metering credit
Net billing	\$, hourly	Monthly	Net Billing Credit
Net billing w/ carryover	\$, hourly	Annual True-Up	Net Billing Credit Net annual true-up payments
Buy all / Sell all	\$, hourly	Monthly	Buy all sell all sales to grid

Upcoming Features

- Fall release: Demand charge ratchets
- Full list: “Electricity rates” filter on GitHub

Thank you!

www.nrel.gov

